

REMARKS

This application has been carefully reviewed in light of the Office Action dated April 16, 2007. Claims 6 to 11 and 27 to 49 are pending in the application, of which Claims 6, 27, 32 and 37 are independent. Reconsideration and further examination are respectfully requested.

Claims 6 to 9, 11, 27 to 30, 32 to 35 and 37 to 40 are rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,104,498 (Shima) in view of Official Notice. Claims 10, 31, 36 and 41 were rejected under 35 U.S.C. § 103(a) over Shima in view of Official Notice, and in further view of U.S. Patent No. 5,237,923 (Williams). Reconsideration and withdrawal of these rejections are respectfully requested.

The present invention concerns a print control apparatus including a generating control unit that changes the second number of copies for a test print to the first number of copies without an instruction from a user when a setup change instruction is received, and then instructs the printer driver to generate the print data to be used for printing after the test print using the second number of copies, intermediate data spooled and a setup changed based on a setup change instruction. Accordingly, the first number of copies of printed product to which a print setup changed after the test print is reflected can be output without user intervention.

Independent Claims 6, 27, 32 and 37

Turning to specific claim language, amended independent Claim 6 is directed to a print control apparatus as a host computer which is connected to an external printing apparatus through an interface and executes a printer driver which generates print

data described in the page description language to be interpreted by the external printing apparatus. The apparatus includes a spooler that saves intermediate data to be converted into the print data, together with a first number of copies designated to be used for printing the print data in accordance with a print instruction from an application; a changing unit that checks if a print instruction is a test print instruction, that changes the first number of copies to a second number of copies for the test print; a generating unit that generates the print data with the printer driver based on the intermediate data and the second number of copies for the test print changed by said changing unit; and a transmitting unit that transmits the print data generated by said generating unit to the printing apparatus; a receiving unit that receives a setup change instruction using a setting screen of the printer driver after the print data for the test print is transmitted by the transmission unit, wherein the setup change instruction is instruction that instructs the printer to print an image different from the image printed on a printing paper by the test print; and a generating control unit that changes the second number of copies for the test print to the first number of copies without an instruction from a user when the setup change instruction has been received, and instructs the printer driver to generate the print data to be used for printing after the test print using the second number copies, the intermediate data spooled by the spooler and a setup changed based on the setup change instruction.

Applicant submits that Shima fails to disclose or suggest at least the features of a receiving unit that receives a setup change instruction using a setting screen of a printer driver after print data for a test print is transmitted, wherein the setup change instruction is instruction that instructs the printer to print an image different from the image printed on a printing paper by the test print; and a generating control unit that changes the

second number of copies for the test print to a first number of copies without an instruction from a user when the setup change instruction has been received, and instructs the printer driver to generate the print data to be used for printing after the test print using the second number copies, intermediate data spooled by a spooler and a setup changed based on the setup change instruction.

In contrast, Shima discloses a controller of a printer that prints one copy of a document as a test print prints when the test print of the document received from a host computer should be performed. If a result of the test print is accepted, the remaining number (for example, $M-1$) of a designated number (for example, M) of copies of a document are printed. Furthermore, Williams discloses that a user is permitted to designate the determinate number of a printed matter after a test print. The user is also permitted to prepare a new print plate using a modified image after a test print.

However, neither Shima nor Williams disclose or suggest a generating control unit as featured in the print control apparatus of Claim 6. Conventionally, an image printed during a test print may differ from an image to be printed during an actual print after the test print. Thus, a number of copies to be printed which is decremented by the test print (i.e., the second number of copies) should be changed into an initial value (i.e., the first number of copies). If the second number of copies is not changed into the first number of copies, the total number of copies of printouts to which the changed setup is reflected is a difference between the first number of copies and the second number of copies. Thus, the number of copies of the printed matters is shorted by the number of test print copies.

To alleviate this problem, a print control apparatus in accordance with Claim 6 prints the first number of copies of a document to which the changed setup is reflected by virtue of the generating control unit that changes the second number of copies for a test print to the first number of copies without an instruction from a user when a setup change instruction is received, and then instructs the printer driver to generate the print data to be used for printing after the test print using: the second number of copies; intermediate data spooled; and a setup changed based on a setup change instruction.

In contrast, Shima fails to disclose changing the number of copies decremented by the test print (i.e., the second number of copies) into the initial number of copies to be printed (i.e., the second number of copies). Furthermore, Williams discloses that a user is permitted to input the number of copies for printing after a test print. This function seems similar to the claimed invention; however, Williams fails to disclose or suggest a generation control unit that changes the second number of copies for the test print to the first number of copies without an instruction from a user when the setup change instruction has been received. Therefore, the user of the apparatus disclosed by Williams must remember the number of copies to be printed and check the number of copies printed by the test print. Accordingly, an operational load of the user using a system in accordance with either Shima or Williams is heavier than that of a user using a print control apparatus in accordance with Claim 6.

In light of the deficiencies of Shima and Williams as discussed above, Applicant submits that amended independent Claim 6 is now in condition for allowance and respectfully requests same.

Independent Claims 27, 32 and 37 are directed to an apparatus, method and computer program embodied in a computer readable storage medium, respectively, corresponding to Claim 6 as amended. Accordingly, Applicant submits that Claims 27, 32 and 37 are now also in condition for allowance and respectfully requests same.

Claims 42, 44, 46 and 48

In regard to newly added claims 42, 44, 46 and 48, these claims include the feature that the receiving unit, step or program code receives a setup change instruction by which the number of pages is laid out on a face of a printing paper, the number of pages being different from the number of pages set for the test printing. For example, the receiving unit defined in Claim 42 receives an instruction for changing a print setup from "4-up" set for a test print into "2-up" after the test print. "N-up" means that N pages are laid out on a face of a sheet of paper. To execute such instruction, a size of a page to be laid out on a face is also changed such that an area of a page is enlarged to double. Responsive to such change, the generating control unit controls generation of print data using a changed setup and intermediate data spooled in the spooler. Accordingly, the image quality of a page laid out on a sheet of paper is kept despite of a designated page size because the generating control unit does not use enlargement/reduction processing for generating a page image to be laid out on a sheet of printing paper.

In contrast, Williams discloses a modification of an image after a test print. Assuming that a print setting is changed from "4-up" into "2-up" an image of a page stored after the test print is enlarged. As a result of the enlargement, a quality of the image laid out on a sheet of paper is reduced.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

CONCLUSION

No fees are believed to be due. However, should it be determined that additional fees are required under 37 C.F.R. 1.16 or 1.17, the Director is hereby authorized to charge such fees to Deposit Account 50-3939.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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